MODIS TECHNICAL TEAM MEETING

January 29, 1998

The MODIS Technical Team Meeting was chaired by Bob Murphy. Present were Eric Vermote, Steve Platnick, Ken Anderson, Bruce Guenther, Wayne Esaias, Bill Barnes, Al Fleig, Steve Wharton, Ed Masuoka, Harry Montgomery, Catherine Harnden and Bob Kannenberg.

1.0 SCHEDULE OF EVENTS

January 15	Semi-annual Reports Due
June 17 - 19	Proposed Dates for Next Science Team Meeting

2.0 MINUTES OF THE MEETING

2.1 Instrument Report

Anderson reported that he had attended a meeting earlier in the day to discuss additional FM1 testing. The list of tests has been narrowed according to priorities and budget, and Anderson and Guenther will formalize it very soon. Anderson stated that a 1 amp fuse in the FM1 forward analog module (FAM) has now blown twice, and this is being investigated. We do not yet know if this is an overstress situation, and whether it will likely be a problem for the PFM instrument as well.

Anderson announced that the AM-1 spacecraft is in the thermal vac chamber at Valley Forge, and pump down will begin either January 30 or 31. The MODIS PFM instrument will start sending data either February 1 or 2.

2.2 MCST Report

Guenther reported that the PM Project has agreed to fund reflectance measurements for the PFM and FM1 scan mirror witness samples. Measurements will be taken between .4 and 15 microns, including the SWIR. Some of these measurements will duplicate those already made by Lincoln Laboratories, and some will be made for the first time; anticipated uncertainty is 3/10 of a percent. The measurements will be made at the National Physics Laboratory in the UK.

Guenther stated that MCST has assembled a staffing plan to support special tests requested at Valley Forge, including a test of the ground commanding process from GSFC (Building 32) to Valley Forge. He added that the AM Project has been very supportive with regard to these tests.

Guenther reported that on January 28 he met with Atmosphere personnel to discuss the "second sample" problem in the SWIR bands (i.e., when MCST looks at the data set for Bands 5, 6 and 7, different values are produced the second time the detectors are read out, as compared to the first time the detectors are read out). This second sample

difference occurs when we are looking at a calibration source, so we know it is an instrument artifact that needs special attention. This meeting included Steve Platnick, Andy Wald, George Riggs and Ed Knight. It was decided that the same corrections will be applied to both the first and the second sample. Platnick indicated that we may have to wait until after launch to characterize the second sample. Guenther added that SBRS is still working this problem, but more information is not expected until April. Platnick stated that there needs to be an unambiguous method to flag the bad pixels; accordingly, the second samples will be given a value of 15 in the uncertainty index. In the aggregation from 500m to 1km, pixels with an index of 15 will be given a zero weighting. That is, second sample SWIR pixels will not be used in the 1km aggregation at launch. If the uncertainty in second sampled pixels can be characterized after launch, then the index value can be reduced and those pixels would be given an appropriate weighting in the 1km aggregation (e.g., a weighting inversely proportional to the index value). Murphy asked about the effect of the second sample problem for MODLAND, and Vermote replied that Surface Reflectance will have to account for it, and he suspects Land Cover will also, but he does not know how much the latter will be affected.

Guenther reported that Chris Moeller has analyzed and modeled the 5.3 micron leakage problem. Moeller has an algorithm that is a first guess as to how to correct the problem, and he will give this algorithm to Knight. It will be fine-tuned after launch.

2.3 SDST Report

Masuoka distributed copies of the "Emergency Back-up Plans: Status Briefing to the EOSDIS Review Group" presentation (Attachment 1), which will be presented to the EOSDIS Review Group (ERG) during its meeting scheduled for February 3 - 5. Murphy commented that MODIS should be represented at this meeting, and he will check into it with Skip Reber. Masuoka will find out the meeting times and locations, and decide who from MODIS should attend.

Masuoka distributed the Version 2 schedule (as of January 29). He noted that Level 1B code was delivered to the DAAC on January 28. Level 1A and Geolocation did not pass the multiple granule test, so SDST will not be finished testing them until January 30. Regarding recent efforts to reduce the time necessary to run Geolocation code, Masuoka indicated that in-lining ISML code saved about 8 minutes. There is still some time to be cut in order to get down to the 20-minute figure. Regarding Ocean Color and Sea Surface Temperature code, Masuoka reported that the developer has promised a fix by February 6.

Masuoka indicated that there are currently four MODLAND PGEs that SDST does not have the manpower to begin working. Murphy asked if the scheduled delivery dates for these PGEs should be pushed back accordingly, and Masuoka replied that he would like to talk with SSTG about this first.

Murphy asked Masuoka about the probability of Land Tiling being included in the at-launch ECS drop. Harnden replied that Land Tiling is to be included in ECS Drop 4,

scheduled to be delivered on March 12. However, ECS has talked about slipping functionality, rather than dates, and it is possible that Land Tiling will not be ready for certification testing and, ultimately, launch. Masuoka stated that he had recently spoken to MODLAND about this issue, and that Justice has asked him to look at possible workarounds to ensure that Land Tiling is there for launch. Murphy requested that SDST, the GSFC DAAC (GDAAC) and MODLAND representatives meet to discuss the Land Tiling issue and ensure that MODIS presents a unified position to ECS.

2.4 GDAAC Report

Wharton distributed the latest GDAAC status update (refer to Attachment 3). He announced that installation of ECS Drop 3 is now complete. Patches must be applied to Drop 3 for compatibility with early MODIS PGEs. The Version 2 SSI&T agreement is about to be signed, and Wharton hopes to have this finalized by the end of the day (January 29). He expressed concern that MAPI has not yet been received at the GDAAC, and it must be delivered and successfully tested at the GDAAC prior to the receipt of PGE01. Another concern is PGE01 (Version 2.1) availability at launch. The GDAAC needs Version 2.1 by April 1 in order to complete SSI&T in time for system certification tests. Murphy asked about the chances of meeting the April 1 delivery date, and Guenther replied that he and Masuoka will investigate this.

Harnden reported that she will be giving a presentation on GDAAC operational readiness to the ERG next week. The three at-launch DAACs have been asked to present their status. GDAAC will be ready to support launch-critical elements.

2.5 Direct Broadcast

Murphy reported that he met earlier with Masuoka and Guenther to discuss direct broadcast and, specifically, how to port the necessary software. Murphy felt this was a good first meeting to assess how the necessary elements will play together to provide direct broadcast. Esaias noted that the Navy is very interested in direct broadcast.

2.6 Earth Science Information Partners (ESIP)

Murphy contacted Martha Maiden to talk about ESIPs. Fleig reported that there is a full list of ESIPs available on the Web, and he will send the URL to Murphy .

2.7 ERG Response to Instrument Teams

Murphy contacted Reber to inquire about the ERG response to the information that the AM-1 instrument teams supplied in December. Apparently the committee members have not yet received the information.

2.8 NPOESS VIIRS

Murphy reported that the IPO has been given a draft statement of work regarding accommodating MODIS-like requirements in the VIIRS instrument. Fleig informed Murphy that VIIRS has no metadata requirement.

2.9 MOCEAN Report

Esaias reported that the DAAC user support group will attend the National Ocean Sciences meeting, and the group would like to obtain some good pictures of hardware and the AM platform for use at a booth. Anderson replied that he can supply this type of material.

Esaias asked if there has been any progress on the standard map images issue (i.e., ensuring that linear lat/long is supported by the toolkit). Masuoka replied that he will ask Karen Loya to work this issue.

Esaias reported that he had recently spoken to Peter Cornillon, PI on an ESIP, who has an approach to subsetting and data distribution that he would like to present to the Science Team. Murphy suggested that this material might be more appropriate for a DAAC meeting or, before presenting to the Science Team, Cornillon should first talk with Masuoka and Harnden.

Esaias once again raised the issue of whether the GDAAC can store products made elsewhere, and when such a capability is planned. Harnden replied that there are lots of factors to consider here, such as writing the necessary ingest software. Harnden, Masuoka, Vollmer and Lynnes will explore this issue further.

2.10 Next Science Team Meeting

Dates for the next Science Team Meeting are now being reconsidered in light of Team members' schedule conflicts.

3.0 ACTION ITEMS

3.1 Action Items Carried Forward: Status Review

1. Masuoka, Guenther, and Wharton: Discuss when and how Version 2.1 will arrive, and how any slips will be handled.

Status: Version 2.1 software is due by April 1. This item is now closed.

3.2 New Action Items

1. Murphy: Contact Reber about MODIS representation at the February 3 - 5 ERG meeting.

2. Masuoka: Find out meeting time and location for the February 3 - 5 ERG meeting, and designate a MODIS representative.

3. Masuoka: Speak to SSTG about possibly revising the scheduled delivery dates for the four MODLAND PGEs that SDST does not currently have the manpower to begin working.

4. SDST, GDAAC and MODLAND: Representatives should meet to discuss the Land Tiling issue and ensure that MODIS presents a unified position to ECS.

5. Guenther and Masuoka: Assess whether Version 2.1 can be delivered by April 1.

6. Fleig: Send Murphy the URL for the Web site containing the full list of ESIPs.

7.Masuoka: Report on the linear projection patches for the toolkit.

8. Masuoka and Harnden: Develop a plan for ingesting / archiving MEBS / SCF-produced standard products, especially Level 3's.